

REMARKS

This Preliminary Amendment is being submitted with a Request for Continued Examination (RCE). Entry of this paper, and no other papers, is respectfully requested.

Request for non-entry of un-entered Amendments

Pursuant to 37 CFR §1.114, entry of this Preliminary Amendment, in lieu of all other amendments, is respectfully requested. The Director is requested to not enter any unentered amendment.

Listing of the Claims

Claims 1 through 60 are pending in the application, and are set forth in the foregoing listing. Pursuant to 37 CFR §121(c), the claim listing, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

Status of the Claims

Claims 1 through 10 and 49 through 54 are allowed.

Claims 20, 24, 34, 37, 39 through 41, 44, 45, 47, 48 and 57 through 59 have been objected to as depending upon rejected claims, but are allowable if re-written in independent form.

Claims 11 through 19, 21 through 33, 35, 36, 38, 42, 43, 46, 55, 56 and 60 stand finally rejected under 35 U.S.C. §103(a) as rendered obvious, and unpatentable over a proposed combination of Applicant's Figure 1 modified according to Heineman U.S. Patent No. 5,465,366.

Amendments of Pending Claims

Claims 11 through 60 are amended in several particulars.

Support for the Amendments of the Claims – 37 CFR §1.173(c)

In accordance with 37 CFR §1.173(c), the structure defined by the amended language of independent amended claims 11, 17, 22, is taught by Applicant's Figure 2 which places Applicant's "switching circuit 240" in a circuit that is independent of "input port" 270 and "signal amplifier" 280. Applicant's circuit as illustrated by Figure 2, controls application of power to one of the electrodes of the monitor without interference in the application of electrical energy to the other electrodes of the monitor. This simplifies the power supply stage of the circuit and eliminates the necessity for both a first auxiliary power supply as well as for a second auxiliary power, as is necessary in the circuit which Applicant teaches in Figure 1, and secondly, by assuring that electrical energy may be supplied some, or all, of the other electrodes¹ of the monitor while accommodating interruption of the application of electrical energy to that electrode of the monitor which serves as the "heater" or as some other structure enabling the monitor to display varying visual images corresponding to the video signals applied to the monitor.

In further compliance with 37 CFR §1.173(c), independent claims 11, 17, 21, 25, 31, 35,

¹ As was kindly noted by the Exhibits cited by the Board of Appeals, such as *Cathode Ray Tubes*, from the *McGraw-Hill Encyclopedia of Science & Technology*, 7th Ed., Vol. 3, pp. 304-312 (1992), such other electrodes may include a cathode, a grid if the monitor is a tetrode type cathode ray tube, a focusing grid, and an anode. Other electrodes would be designated for thin-film transistor type monitors, for organic light electroluminescent device type monitors, and for plasma display monitors.

38, 43, 46 and 55 are amended to define Applicant's combination of a "power supplying section"² and "power controlling section" as, for example,

"a switch disposed between said power supply and the heater, said switch interrupting application of the electrical energy to the heater independently of other applications of the electrical energy to the monitor when the monitor enters a power-off mode,"³

which is described in the specification of Applicant's '830 Patent in terms of,

"directly cuts off the supply of power directed to the heater of the color display tube, instead of lowering all output power being produced in the power supplying section,"⁴

in response to Applicant's "power-off signal."⁵

Claims 11, 17, 21, 25, 31, 35, 38, 43, 46 and 55

Independent claims 11, 17, 21, 25, 31, 35, 38, 43, 46 and 55 are amended to define Applicant's switch as "interrupting application of electrical energy to the heater independently of other applications of electrical energy to the monitor" This structure defined by the amended language of amended claims 11, 17, 21, 25, 31, 35, 38, 43, 46 and 55 is taught by Applicant's Figure 2 which places Applicant's "switching circuit 240" in a circuit that is independent of "input port" 270 and "signal amplifier" 280. Moreover, unlike the circuit taught by Applicant's Figure 1, Applicant's circuit as defined by Claims 11, 17, 21, 25, 31, 35, 38, 43, 46 and 55 advantageously

² See, for example, Applicant's U.S. Patent No. 5.944.830, col. 5, line 11.

³ Amended claim 11, lines 3-5.

⁴ See, for example, Applicant's U.S. Patent No. 5.944.830, col. 5, lines 15-18.

⁵ See, for example, Applicant's U.S. Patent No. 5.944.830, col. 5, line 14.

controls application of power to one of the electrodes of the monitor without interference in the application of electrical energy to the other electrodes of the monitor. This beneficially simplifies the power supply stage of the circuit by, among other improvements, eliminating the necessity for both a first auxiliary power supply as well as for a second auxiliary power, as is necessary in the circuit which Applicant teaches in Figure 1, and secondly, by assuring that electrical energy may be supplied some, or all, of the other electrodes⁶ of the monitor while accommodating interruption of the application of electrical energy to that electrode of the monitor which serves as the "heater."

This state places the monitor in a "power-off mode." In view of these and other distinctions, and the foregoing advantages flowing from these distinctions, claims 11, 17, 21, 25, 31, 35, 38, 43, 46 and 55, together with claims 12 through 16, 18 through 20, 22 through 24, 26 through 30, 32 through 37, 39 through 42, 44, 45, 47 through 54 and 56 through 60 are patentably distinguishable over the art of record.

Claims 17, 21, 25, 31, 35, 38, 43, 46 and 55

Independent claims 17, 21, 25, 31, 35, 38, 43, 46 and 55 are additionally amended to define Applicant's switch as,

"providing electrical energy to a heater of a tube in a monitor and to a plurality of electrodes in the monitor;"

⁶ As was kindly noted by the Exhibits cited by the Board of Appeals, such as *Cathode Ray Tubes*, from the *McGraw-Hill Encyclopedia of Science & Technology*, 7th Ed., Vol. 3, pp. 304-312 (1992), such other electrodes may include a cathode, a grid if the monitor is a tetrode type cathode ray tube, a focusing grid, and an anode. Other electrodes would be designated for thin-film transistor type monitors, for organic light electroluminescent device type monitors, and for plasma display monitors.

in combination with,

providing a switch between a source of said electrical energy and the heater; and operating the switch to interrupt application of the electrical energy to the heater independently of other applications of the electrical energy to others of the plurality of electrodes when the monitor enters a power-off mode when the monitor enters a power-off mode.”

This process is taught by Applicant’s Figure 2 which places Applicant’s “switching circuit 240” in a circuit that is independent of “input port” 270 and “signal amplifier” 280.

Applicant defines five modes of operation for a monitor:

- an *active mode* “when a monitor ... displays information or images on its screen according to signals supplied by the video output of the computer” (col. 1, lines 22-25);
- an *inactive mode* when “the HSYNC and VSYNC signals are not supplied to the monitor when the computer is in an inactive state” (col. 1, lines 30-32);
- a *suspend mode* of the DPMS system, which follows the *inactive mode* (col. 1, lines 32-33);
- a *standby mode* of the DPMS system which follows the *suspend mode* (col. 1, lines 33-34); and
- a *power-off mode* of the DPMS system

The circuit of Applicant’s Figure 1 however, has only “On, standby, suspend, and OFF modes” (col. 4, lines 56-57); consequently, when “regulator 20 lowers the output voltage supplied to the transformer 30,” then “**all of the output voltages** produced at the secondary of the transformer 30”

are concomitantly lowered (col. 4, lines 42-45), while the circuits of Figures 1 through 4 of Heineman '366, which uses "a standard 120 volt AC power line" from "power supply 22"⁷, and which "sends a control signal which causes the two switches 40, 46 to enter the 'open' state." Consequently, in any proposed combination of Applicant's Figure 1 and Heineman '366, "both the power supply 22 and the data path from the peripheral input devices 16, 18 to the computer 14 are electrically isolated"⁸ during any state other than the "ON state" of the proposed combination.

Moreover, unlike the circuit taught by Applicant's Figure 1, and unlike the circuit taught by such exemplars of the art as Heineman U.S. 5.464.366, Applicant's circuit as defined by Claim 11 advantageously controls application of power to one of the electrodes of the monitor without interference in the application of electrical energy to the other electrodes of the monitor. This beneficially simplifies the power supply stage of the circuit by, among other improvements, eliminating the necessity for both a first auxiliary power supply as well as for a second auxiliary power, as is necessary in the circuit which Applicant teaches in Figure 1, and secondly, by assuring that electrical energy may be supplied some, or all, of the other electrodes⁹ of the monitor while

⁷ Heineman '366 teaches illustrates that "power supply 22" is a wall outlet, and "standard 120 volt AC power line" 38 is a power cord with a ground wire, a return lead and a hot lead.

⁸ Heineman '366, col. 3, lines 33-37.

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accommodating interruption of the application of electrical energy to that electrode of the monitor which serves as the "heater."

These advantages are not available with either the circuit of Applicant's Figure 1 or with the circuits of Figures 1 through 4 of Heineman '366, which uses "a standard 120 volt AC power line" from "power supply 22"¹⁰, and which "sends a control signal which causes the two switches 40, 46 to enter the 'open' state" where "both the power supply 22 and the data path from the peripheral input devices 16, 18 to the computer 14 are electrically isolated."¹¹ In short, in both (i) Applicant's Figure 1 and (ii) in the circuits of Figures 1 through 4 of Heineman '366, and (iii) in the Examiner's proposed combination of Applicant's Figure 1 and in the circuits of Figures 1 through 4 of Heineman '366, switches 40, when in the 'open' state", places "power supply 22 ... [to be] electrically isolated";¹² consequently, no electrical power of any nature is supplied by "power supply 22" of Heineman '366 or by "transformer 40" of Applicant's Figure 1, to the monitor. This state places the monitor in a "power-off mode." In view of these and other distinctions, and the foregoing advantages flowing from these distinctions, claim 11 through 16 are patentably distinguishable over the art of record.

Claim 21

¹⁰ Heineman '366 teaches illustrates that "power supply 22" is a wall outlet, and "standard 120 volt AC power line" 38 is a power cord with a ground wire, a return lead and a hot lead.

¹¹ Heineman '366, col. 3, lines 33-37.

¹² Heineman '366, col. 3, lines 33-37.

Independent claim 21 is amended in a software process format¹³ to define Applicant's switch as,

An apparatus, comprising:

a switch between a source of electrical energy and one of a plurality of electrodes in a video monitor, with others of the plurality of electrodes being disposed to respond to video signals applied to the others of the plurality of electrodes to display varying video images corresponding to the video signals; and

a computer storage medium having stored thereon a set of instructions implementing a method, the set of instructions comprising one or more instructions for:

providing the electrical energy to that one of the plurality of electrodes via the switch to enable the monitor to display the varying visible images; and

operating the switch to interrupt application of the electrical energy to that one of the plurality of electrodes independently of other applications of the electrical energy to the others of the plurality of electrodes when the monitor enters a power-off mode.

The process of the software defined by the amended language of claim 21 is taught by Applicant's Figure 2 which places Applicant's "switching circuit 240" in a circuit that is independent of "input port" 270 and "signal amplifier" 280. Moreover, unlike the circuit taught by Applicant's Figure 1, Applicant's circuit as defined by Claim 11 advantageously controls application of power to one of the electrodes of the monitor without interference in the application of electrical energy to the other electrodes of the monitor. This beneficially simplifies the power supply stage of the circuit

¹³ See, for example, valid and infringed software process claim 61 in *TIVO, Inc. v. Echostar Communications Corporation, et al.*, __ F.3d __, __ USPQ2d __ (Fed. Cir. 31st January 2008).

by, among other improvements, eliminating the necessity for both a first auxiliary power supply as well as for a second auxiliary power, as is necessary in the circuit which Applicant teaches in Figure 1, and secondly, by assuring that electrical energy may be supplied some, or all, of the other electrodes¹⁴ of the monitor while accommodating interruption of the application of electrical energy to that electrode of the monitor which serves as the "heater."

Applicant defines five modes of operation for a monitor:

- an *active mode* "when a monitor ... displays information or images on its screen according to signals supplied by the video output of the computer" (col. 1, lines 22-25);
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- a *suspend mode* of the DPMS system, which follows the *inactive mode* (col. 1, lines 32-33);
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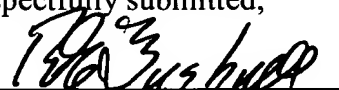
²⁰ Heineman '366, col. 3, lines 33-37.

Conclusion

In view of the foregoing arguments and remarks, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. Should any questions remain unresolved, the Examiner is requested to telephone Applicants' attorney.

Fees for filing a Request for Continued Examination (RCE) and for a Petition for a two-month extension of time, accompany this Preliminary Amendment,. Should the check become lost, be deficient in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,



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